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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/260,478	03/01/99	TITARU	I

IONEL TITARU  
4400 E BROADWAY  
SUITE 414  
TUCSON AZ 85711

MM12/0211

EXAMINER

LAXTON, G

ART UNIT

PAPER NUMBER

2838

DATE MAILED: 02/11/00

Please find below and/or attached an Office communication concerning this application or  
proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.  
09/260,478

Applicant(s)  
I nel Titaru

Examiner  
Gary Laxton

Group Art Unit  
2838



☐ Responsive to communication(s) filed on \_\_\_\_\_

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claim

☒ Claim(s) 1-35 is/are pending in the applicat

Of the above, claim(s) 8-35 is/are withdrawn from consideration

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-7 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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## **DETAILED ACTION**

### ***Election/Restriction***

1. The pending claims were subject to an Election of Species. Applicant elected Group II drawn to claims 1-7. Claims 8-35 have been withdrawn from consideration.

### ***Specification***

2. The abstract of the disclosure is objected to because in line 5 the phrase "...by tow capacitors and two capacitors" appears to have a spelling error and the meaning is unclear. Correction is required. See MPEP § 608.01(b).

3. The disclosure is objected to because of the following informalities: spelling errors. Appropriate correction is required.

The disclosure contains numerous spelling errors. Please review and correct any grammatical errors and spelling mistakes that may have been missed. For example, page 1 line 27, "...the current flowing form..." should read "...the current flowing from...".

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 1 recites the limitations "the first rectifier means" line 7, "the second rectifier means" line 9, "the third rectifier means" line 11, "the fourth rectifier means" line 13, "said AC voltage source" line 15, "said voltage source" line 19, "said inductor element" line 22, "said rectifiers" line 23, "said capacitors" line 23, "said positive and negative alternation" line 23 and "the signal" line 24. There is insufficient antecedent basis for these limitations in the claim.

Please use consistent language when referring to distinct elements.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

8. Claims 1, 4 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Tan et al. Tan et al discloses, in figure 1, a low impedance AC source (26) and an inductive element (SR1) in series with the AC source. A bridge rectifier (32) with rectifying elements. Furthermore, there

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is shown a capacitor (38). The voltage source modulates the energy transfer through the inductor and rectifier to the capacitor and load, obviously.

*Claim Rejections - 35 USC § 103*

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tan et al.

Tan et al discloses the claimed invention as stated above except for not allowing the current in the inductive element (SR2 or Lf) to reach zero before the voltage source switches polarity.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to change the current through an output inductor by varying the timing of the primary side switches to adjust the current level of an output inductive element to better control the output characteristics.

11. Claims 2 and 3 rejected under 35 U.S.C. 103(a) as being unpatentable over Tan et al in combination with Cowett.

Tan et al discloses the claimed invention as stated above except for replacing the rectifier elements with controlled synchronous rectifiers.

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Cowett shows a rectifier comprised of controlled switches (26A-26D). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to compose a rectifier out of controlled switches in order to accurately control the rectification process to produce a precise and controlled full wave rectified signal.

12. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tan et al in view of Stacey et al.

Tan et al discloses the claimed invention as stated above except for replacing the rectifier elements with controlled synchronous rectifiers.

Stacey shows a rectifier comprised of controlled switches (26A-26D). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to compose a rectifier out of controlled switches in order to accurately control the rectification process to produce a precise and controlled full wave rectified signal.

13. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tan et al in combination with Schutten et al.

Tan et al discloses the claimed invention as stated above except for a bi-directional switch.

Schutten et al shows that it was known in the art to use a bi-directional switch (16), of figure 1, that switches to position A or B to assist in shaping the output waveform.

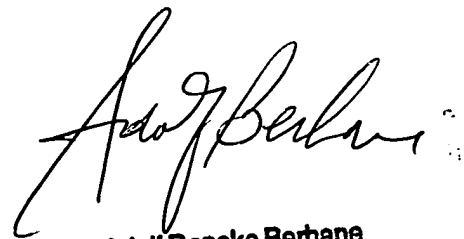
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Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate a bi-directional switch in a rectifier to aid in shaping the output waveform for more precise output control.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary L. Laxton whose telephone number is 703-305-7039. The examiner can normally be reached on 5-4-9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter S. Wong can be reached on 703-305-3477. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7723 for regular communications and 703-305-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

  
**Adolf Deneke Berhane**  
**Primary Examiner**

GLL

February 7, 2000